

Chapter 5

RESOURCE REGULATION

The District implements two permitting programs for wetland protection and water resource allocation: the environmental resource permitting (ERP) program and the consumptive use permitting (CUP) program. Both require an evaluation of wetland impacts which may occur due to an applicant's request.

ENVIRONMENTAL RESOURCE PERMITTING

The ERP program deals with the construction of surface water management systems and dredge and fill activities. Surface water management systems are required for all forms of development ranging from agriculture to commercial and residential. This means that developed sites containing more impervious surfaces or altered topography, must provide a way for storm water to be directed to water management areas for water quality treatment and flood attenuation.

During the ERP process, wetlands are evaluated both on and adjacent to the project site. If wetland impacts are proposed in an ERP application, an analysis is conducted to determine if the impacts can be eliminated or reduced. Impacts to wetlands can occur through direct physical alteration, such as filling or dredging, or through alteration of the normal hydrologic regimes, such as lowering of the water table. All types of impacts are reviewed during the ERP process.

If the proposed wetland impacts are determined to be permissible, an applicant will need to provide compensation for the loss of the wetland functions. Generally this is accomplished through mitigation, consisting of the restoration or enhancement of existing wetlands, the creation of new wetland habitat, or a combination of these methods. The mitigation areas must be monitored and maintained over the long term and protected with a conservation easement.

If the applicant proposes to preserve the wetlands on the project site, an analysis is conducted to determine what effects the development will have on the wetlands. An applicant must provide an upland buffer, must ensure that adequate quantities of water will be available to wetlands and that the wetlands will not be over inundated for prolonged periods of time. A conservation easement is required to ensure the long-term protection of the wetlands.

CONSUMPTIVE USE PERMITTING

The District has the authority and responsibility to establish policies for the use and regulation of water that maximize reasonable-beneficial uses that are in the public interest, as long as these policies safeguard the environment, other legal users, and water quality. These policies are implemented through intergovernmental coordination, establishment of programs, and the permitting process.

Water resources are used for many purposes including agricultural, landscape, and golf course irrigation; potable water; commercial; and industrial uses. All water withdrawals within the District require a District water use permit except: (1) water used in a single family dwelling or duplex, and provided that the water is obtained from one well for each single family dwelling or duplex, and is used either for domestic purposes or outdoor uses; (2) water used for fire fighting; and (3) the use of reclaimed water. The first exemption is provided in state legislation; the latter two are District exemptions.

The District issues water use permits in two forms, individual water use permits and general water use permits. An individual water use permit is issued for projects whose water use exceeds 100,000 gallons per day (GPD) while general permits are issued when the use does not exceed 100,000 GPD, except in reduced threshold areas. A general water use permit is issued for a duration of up to 20 years while individual permits are generally issued for a shorter period. Individual permits are issued with an expiration date that corresponds with the basin expiration date, at which time water use permits for the entire basin will have to be renewed. The current basin expiration date in the planning area is December 15, 2001.

The District has issued 818 individual consumptive use permits in the planning area (Table 11). Most of these permits are for agricultural uses. Total allocations and permits are listed by county in Appendix D.

Basis of Review Criteria

The permitting process involves reviewing water use permits for consistency with criteria in the District's Basis of Review (BOR). Chapter 2 of the BOR, Water Need and Demand Methodologies, include criteria for demonstration of need, calculation of water demands, and water conservation requirements for the different use classes. The criteria in Chapter 3, Water Resource Evaluations, address the evaluation of the potential impacts to the resource, existing legal users, the environment, saline water intrusion, and water quality degradation (SFWMD, 1994).

Table 11. Individual Permit Allocations.

Water Use Category	Number of Permits	Allocation (MGD)	% of Total Allocations
Agriculture	505	562.1	86
Public Water Supply	143	45.7	7
Golf	32	12.9	2
Landscape	91	8.0	1
Dewatering	15	19.2	3
Other*	32	7.0	1
Total	818	654.9	100

*Includes the following water use categories: Industrial, Nursery, Recreational, Aquaculture, Livestock, and Other.

Source: SFWMD, 1992, Consumptive Use Permitting Program data.

Areas with Increased Permitting Restrictions

An increased level of consumptive use permitting restrictions is applied to areas where there is potentially a lack of water available to meet demands. These areas include reduced threshold areas, restricted allocation areas, areas of special concern, and critical water supply problem areas.

Reduced Threshold Areas

The volume of usage which delineates a general permit from an individual permit is referred to as the permit threshold. In most of the District, the permit threshold is 100,000 GPD. However, in resource depleted areas, where there has been an established history of substandard water quality, saline water movement into ground water and surface water bodies or the lack of water availability to meet projected needs of a region, the District has reduced this threshold to 10,000 GPD average or 20,000 GPD maximum. These areas are referred to as reduced threshold areas (RTAs). RTAs have been established in the UEC Planning Area at Stuart Peninsula, Lighthouse Point Peninsula, and the Savannas and Jensen Beach Peninsula. About 5.5 percent of the planning area is covered by RTAs. A map displaying these areas is located in Appendix D.

Restricted Allocation Areas

In addition to RTAs, the District has also designated areas as restricted allocation areas. These are designated areas within the District for which allocation restrictions are applied to the use of specific water sources. A map displaying these areas is provided in Appendix D. The water resources in these areas are managed in response

to specific sources of surface water and ground water for which there is a lack of water availability to meet the needs of the region. The UEC Planning Area contains three restricted allocation areas, as identified in the BOR:

1. Projects located in the Eastern Okeechobee - Northwestern St. Lucie Basin (Figure B-3 in BOR) withdrawing water from the Floridan Aquifer are limited to 1.5 inches for the maximum month, with the balance of water needs being withdrawn from other sources.
2. Pumps designed to increase the withdrawal rate above that which occurs naturally are prohibited on all Floridan wells located in Martin and St. Lucie counties unless the pump was in place and operational on the well prior to March 2, 1974 or the applicant justifies that the pumping will not have an adverse impact on any existing legal use.
3. No additional water will be allocated from, or direct connections to, the C-23, C-24, or C-25 over and above existing allocations, until District investigations show that additional water is available for allocation.

Areas of Special Concern

Areas of special concern are areas where there are limitations on water availability or there are other potentially adverse impacts associated with a proposed withdrawal. These areas are determined by the District on a case-by-case basis. There are no designated areas of special concern in the UEC Planning Area.

Water Resource Caution Areas

Water resource caution areas are areas that have existing water resource problems or areas in which water resource problems are projected to develop during the next 20 years. These areas were formerly referred to as critical water supply problem areas and were required to be designated by rule by each water management district pursuant to Chapter 62-40, F.A.C., the Water Resource Implementation Rule. This chapter further states that applicants in these areas must make use of a reclaimed water source unless the applicant demonstrates that its use is not economically, environmentally or technologically feasible. The entire UEC Planning Area is designated as a water resource caution area. The Water Resource Implementation Rule requires these designations be updated within one year of completion of the District Water Management Plan and its future updates.

WATER SHORTAGE MANAGEMENT

Water shortages, and the associated restrictions, are declared by the District's Governing Board when there is not enough water available for present or anticipated needs, or when a reduction in demand is needed to protect water resources. Ground water and surface water levels are continuously monitored, and if they fall to levels considered critical for the time of year and anticipated demands, then the water shortage process is initiated. There are different levels of drought, and these require corresponding levels of restrictions. Water shortage declarations range from a "warning," which has voluntary moderate restrictions, through four phases of water shortage, to an "emergency," which can restrict withdrawals up to the point of disallowing any further withdrawals from a source.

The water shortage phases reflect the percent reduction in withdrawals necessary to reduce demand to the anticipated available water supply.

The phases are:

- Phase I: Moderate - up to 15 percent reduction
- Phase II: Severe - up to 30 percent reduction
- Phase III: Extreme - up to 45 percent reduction
- Phase IV: Critical - up to 60 percent reduction

Each declared source class is assigned a water shortage phase, and source classes can be combined if appropriate. A water shortage warning has the same restrictions associated with a Phase I, but participation is voluntary. Any of the phases of water shortage can be modified by the Governing Board if necessary. The District's Water Shortage Plan is located in Chapter 40E-21, F.A.C. The current water shortage procedure was originally adopted by the District in 1982. Prior to that, restrictions were made during periods of drought but did not necessarily correspond to the current requirements of the phases of water shortage.

In March 1981 a water shortage in the UEC Planning Area was declared for both ground and surface water, and restrictions were in place through September of that year. Another drought in the region resulted in a water shortage warning for the entire region in March and April of 1985. The most recent water use restrictions in the planning area began with water shortage warnings in 1989 for ground and surface water, which escalated into Phase I, Phase II, and emergency restrictions for some surface water users. These restrictions were reduced as conditions improved and were rescinded in March 1992. A summary of the water shortages declared in the planning area is presented in Table 12.

Table 12. History of Water Shortages.

Issue Order #	Restrictions	Area Affected	Date Declared	Date Rescinded
81-13	10% reduction for ground and surface water users	Martin County	5-6-81	9-11-81
81-14	25% reduction for agriculture, golf courses, nurseries	Martin County	5-14-81	9-11-81
81-28	10% reduction all uses	All of St. Lucie, area in Okeechobee not directly served by Lake Okeechobee	7-21-81	7-27-81
81-29	10% reduction for shallow aquifer and surface water systems	All of St. Lucie, area in Okeechobee not directly served by Lake Okeechobee	7-27-81	9-11-81
85-1	Warning: Ground and surface water	St. Lucie, Okeechobee, and Martin counties	3-14-85	4-24-85
89-07	Warning: Voluntary phase I – ground water	Southeastern Martin County	2-9-89	6-17-91
89-12	Phase I: Ground and surface Water	Southeastern Martin County	7-13-89	12-20-90
89-14	Warning: Voluntary phase I – ground and surface water	St. Lucie River Basin	9-14-89	3-12-92
90-04	Phase I: Surface water	St. Lucie River Basin	10-12-89	3-12-92
90-06	Phase II: Surface water	St. Lucie River Basin	12-14-89	3-12-92
90-18	Emergency: Surface water from C-24	Portions of St. Lucie County Agricultural Area	4-27-90	3-12-92
90-19	Warning: Surface water from C-25	Portions of St. Lucie County Agricultural Area	4-27-90	3-12-92
90-22	Emergency: Surface water from C-24 to 14.0 ft. NGVD	Portions of St. Lucie County Agricultural Area	5-10-90	3-12-92
91-02	Modified phase I: (specific restrictions) – Ground and surface water	Southeastern Martin County	12-20-90	6-14-91
91-05	Modified phase I: (specific restrictions) – Ground and surface water	Southeastern Martin County	6-14-91	3-12-92

Note: Dashed line indicates beginning of phased water shortages.

WELLHEAD PROTECTION ORDINANCES

The purpose of a wellhead protection program is to protect the ground water in the vicinity of a public water supply wellfield from potential sources of contamination. A wellhead protection program entails a management process that acknowledges the relationship between activities that take place in wellfield areas and the quality of the ground water supply for those wells. A Wellhead Protection Area (WHPA) is delineated as the surface area, projected from the subsurface, surrounding a well or wellfield through which water (and potential contaminants) will pass and eventually reach the well(s).

Wellhead protection area boundaries (zones) are determined based on a variety of criteria (e.g., travel time, drawdown, distance, etc.) and methods (e.g., analytical/numerical flow models, fixed radii, etc.). Factors such as the such as the aquifer physical characteristics, aquifer boundaries, the extent of pumping, the degree of confinement, the vulnerability of the aquifer to surface contamination, and the degree of development and land use activity surrounding the well(s) are used in the process. Because methods/criteria employed and physical conditions vary, WHPAs can range anywhere from a distance of a few hundred feet to several miles from pumping wells. Management activities commonly employed within these protection areas include regulation of land use through special ordinances and permits, prohibition of specified activities, and acquisition of land.

Martin and St. Lucie counties have adopted permanent wellhead protection ordinances. These ordinances, as well as federal and state aquifer protection laws, are discussed in Appendix H.

